What is Claimed is:

1. A method for displaying hierarchically linked information, said hierarchically linked information comprised of a plurality of nodes each having one or more links to other of said plurality of nodes, said method comprising the steps of:

a) identifying a focus node for said plurality of nodes;

b) generating a degree of interest (DOI) value for each of said plurality of nodes, said degree of interest value relative to said focus node and corresponding to a node size;

c) laying out said plurality of nodes positioned based on associated links and sized based on associated degree of interest values in a tree structure;

d) identifying and performing any node compression necessary for displaying said hierarchically linked information based on the layout of said plurality of nodes; and .

e) displaying said hierarchically linked information based on said layout of plurality of nodes and node compression on a display area.

2. The method as recited in claim 1 further comprising the step of:

f) detecting that a user has selected a second focus node;

g) generating a second degree of interest value for each of said plurality of nodes relative to said second focus node;

h) repeating steps c)-e) using said second degree of interest value for each of said plurality of nodes.

3.   The method as recited in claim 1 wherein said step of generating a degree of interest (DOI) value for each of said nodes is further comprised of the steps of:

b1) assigning a DOI value of 0 to focus node and parents up to root of tree;

b2) assigning a DOI value of 0 to most interesting child node at user defined number of levels below focus node;

b3) assigning a DOI value of -1 to siblings of nodes with value 0; and

b4) assigning a DOI value of one less than parent for all the rest of the nodes.

4.   The method as recited in claim 1 wherein said step of generating a degree of interest (DOI) value for each of said nodes is further comprised of the steps of:

b1) assigning a DOI value of -1 to all selected nodes;

b2) assigning a DOI value of -1 to parents of selected nodes up to root of tree; and

b3) assigning a DOI value of one less than parent for all the rest of the nodes.

5.   The method as recited in claim 1 wherein said step of laying out said plurality of nodes positioned based on associated links and sized based on

associated degree of interest values in a tree structure is further comprised of the steps of

c1)   determining if said structure will fit vertically into said display area;

c2)   if said layout does not fit into said display area, reducing node spacing and/or sizes proportionally until node-link structure fits in said display area.

6.   The method as recited in claim 1 wherein said step of identifying and performing any node compression necessary for displaying said linked information based on the layout of said plurality of nodes is further comprised of the steps of:

d1)   determining from said layout that said nodes will not fit horizontally into said display area; and

d2)   causing nodes at the edges of the display area to be overlapped.

7.   The method as recited in claim 1 wherein said step of identifying and performing any node compression necessary for displaying said linked information based on the layout of said plurality of nodes is further comprised of the step of:

d1)   determining from said layout that said nodes will not fit horizontally into said display area because certain levels are too wide; and

d2)   causing sibling nodes at wide levels to be folded into multiple rows in the display area.

8.   The method as recited in claim 1 wherein said step of identifying and performing any node compression necessary for displaying said linked information based on the layout of said plurality of nodes is further comprised of the step of:

d1)   determining from said layout that said nodes will not fit vertically into said display area;

d2)   identifying subtrees in said layout causing said layout not to fit in said display area;

d3)   causing said subtrees to be displayed in a manner proportionate to the size of the subtree.

9. The method as recited in claim 1 wherein prior to step e) performing the steps of:

determining that there is unused display area for said structure;

identifying most interesting nodes for utilizing said unused display area; and

generating new degree of interest values for said identified most interesting nodes and their linked decedent nodes.

10.   The method as recited in claim 1 wherein said step of displaying said linked information is further comprised of the step of displaying a first set of data items associated with said nodes.

11. The method as recited in claim 10 further comprising the step of:

detecting that a user has requested that a second set of data items associated with said nodes be displayed; and

displaying said second set of data items associated with said nodes.

12. The method as recited in claim 11 wherein said nodes are displayed to appear as three-dimensional objects having a plurality of display surfaces and said step of displaying said second set of data items associated with said nodes is comprised of the step of animating movement of said node to display a second surface of said node having said second set of data items.

13. System for browsing a collection of hierarchically linked data comprising:

   display means having a display area for presenting views of a visualization of said collection of hierarchically linked data;

   input device for providing input to change view of said visualization of said collection of linked data; and

   visualization processing element coupled to said display means and said input device, said visualization for creating a tree structure visualization of said collection of hierarchically linked data based on a Degree of Interest and a size of said display area.

14. The systems as recited in claim 13 wherein said visualization processing element is further comprised of:

a Degree of Interest (DOI) calculation element;

a node layout element; and

a node compression element.

15. The systems as recited in claim 14 wherein said visualization processing element is further comprised of a node expansion element.

16. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for displaying hierarchically linked information, said hierarchically linked information comprised of a plurality of nodes each having one or more links to other of said plurality of nodes, said method comprising the steps of:

a) identifying a focus node for said plurality of nodes;

b) generating a degree of interest (DOI) value for each of said plurality of nodes, said degree of interest value relative to said focus node and corresponding to a node size;

c) laying out said plurality of nodes positioned based on associated links and sized based on associated degree of interest values in a tree structure;

d) identifying and performing any node compression necessary for displaying said hierarchically linked information based on the layout of said plurality of nodes; and .

e) displaying said hierarchically linked information based on said layout of plurality of nodes and node compression on a display area.